



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,822	08/15/2005	Othmar Zuger	H37-122 US	2481
21706 7590 02/21/2008 NOTARO AND MICHALOS 100 DUTCH HILL ROAD SUITE 110 ORANGEBURG, NY 10962-2100				
EXAMINER				
FORD, NATHAN K				
ART UNIT		PAPER NUMBER		
1792				
MAIL DATE		DELIVERY MODE		
02/21/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/530,822

**Applicant(s)**

ZUGER, OTHMAR

**Examiner**

NATHAN K. FORD

**Art Unit**

1792

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Amendments*

The amendments to the specification and claims submitted on December 5, 2007, are entered. Claims 3-5 are new. Claims 1 and 2 are amended. The objections to the drawings are withdrawn.

### *Applicant's Response*

The applicant asserts that the amendments requiring the measuring of the thickness of a substrate coating at different positions is not taught by Maguire. The applicant is correct in this regard; as such, the rejection under Maguire is withdrawn and a new rejection under Baldwin is submitted.

### *Claim Interpretation*

According to paragraph forty-three of the applicant's specification, the means for language of claim 1 is interpreted as being inclusive of a controller that receives signals from a thickness detection system; based on this signal, an operating parameter of the coating source supply is modified. Example operating parameters include power, gasflow, and magnet motion.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Baldwin et al., US 6,419,802. Baldwin, disclosing a system and method for controlling deposition thickness, teaches the following:

Claim 1:

- A coating source (22) for processing the substrate;
- Multiple sensors (18) that sequentially measure the thickness of the coating at two different locations in the movement direction of the substrate (Figs. 1A, B; 2, 41-67);
  - Wherein the thickness measurements generate a sensor signal (Fig. 1A);
- A process controller (24) that receives a signals from the thickness detection system (Fig. 1A);

Art Unit: 1792

- o Wherein the power of the motor that rotates the substrate can be modified according to the received signal (Fig. 7; 5, 65ff).

Claims 2 and 5:

- Processing the substrate in a treatment area of a treatment source;
- Wherein the processing proceeds in accordance with a set of parameters;
  - o Wherein an operating parameter is motor power;
  - o Wherein a control parameter is film thickness;
- Measuring deposition thickness at two different locations in the movement direction of the substrate (Fig. 1B);
- Determining a deviation (740, 750, 760) of the subset from a predetermined set point (Fig. 7);
- Generating a control signal in response to a deviation (5, 65ff);
- Modifying an operating parameter, motor power, in response to the control signal to compensate for the deviation (5, 65ff).

*Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baldwin in view of Baldwin et al., US 6,402,905, hereafter Baldwin\*.

Baldwin uses multiple sensors (18) to measure deposition thickness at “multiple positions” on the wafer, but does not explicitly state that the sensors are disposed orthogonally to the wafer’s direction of movement (6, 17-25). Baldwin\*, disclosing essentially the same apparatus and method as Baldwin, avails three sensors (16) that measure the deposition thickness of a rotating substrate at distinct radii (18) perpendicular to the movement direction of the substrate (Fig. 2; 2, 4-11). Given this disclosure, it would have been obvious to one of ordinary skill in the art at the

Art Unit: 1792

time the invention was made to dispose the sensors of Baldwin along a direction perpendicular to the movement direction of the substrate to achieve the predictable result of attaining measurements of deposition thickness.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan K. Ford whose telephone number is 571-270-1880. The examiner can normally be reached on M-F, 8:30-5:00 EDT. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Cleveland, can be reached at 571-272-1418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

nkf

/Michael Cleveland/

Supervisory Patent Examiner, Art Unit 1792